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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,170	01/14/2005	Akihisa Takaichi	Q85324	9122

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EXAMINER	
BADR, HAMID R	

ART UNIT	PAPER NUMBER
1794	

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02/20/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/521,170	TAKAICHI ET AL.	
	Examiner	Art Unit	
	HAMID R. BADR	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/14/2005, 9/29/2005, 8/14/2007, 9/5/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takaichi et al. (EP 0 443 047) in view of Bunger et al. (US 5,385,748), Takahata (US 4,212,893), and Chalupa et al. (US 5,597,604)

3. Takaichi et al. disclose a liquid nutrient composition containing 3.5 to 7 g of total protein, 5 to 17 g of carbohydrate, and 1-5 g of fat in 100 ml of the liquid nutrient. The protein fraction is a protein hydrolysate having a molecular weight of 800-30,000. The carbohydrate fraction comprises one or more oligosaccharides consisting of maltotriose, maltotetrose, maltopentose and maltohexose. (Page 2, lines 42-46).

4. They teach using various sources of proteins. They specifically discuss the enzymatically hydrolyzed proteins with a molecular weight in the range of 800 to 30,000 Daltons and more preferably 10,000 to 15000 Daltons. They teach using hydrolyzed gelatin (water soluble gelatin) and enzymatically hydrolyzed casein. These proteins are used in a proportion of 35 to 46 weight percent of the total protein. (Page 3, lines 7-17).

5. Takaichi et al. teach using carbohydrates which include mono-, di-, oligosaccharides, and polysaccharides including glucose, sucrose, maltohexose, starch and glycogen. (Page 3, lines 31-33).

6. The fat component of the nutrient fluid composition may include animal fat or vegetable fat such as rice oil, corn oil, soybean oil, butter, lard and other oils. (Page 3, lines 34-37).

7. They teach using colors, emulsifiers, stabilizers, preservatives and so on (Page 3, lines 47-48). They disclose a method for mixing and emulsifying the components in water (Page 2, lines 50-51). Formulation number 6 (Table 1, page 6) contains about 60% (w/w) water.

8. Takaichi et al. are silent regarding the use of citric acid, ascorbic acid, agar, gellan gum, lactic acid, locust bean gum, guar gum xanthan gum, and pH of the liquid composition.

9. Bunger et al. disclose a beverage thickener/emulsifier system. They teach using guar gum from about 0.001 to 0.1% and preferably from 0.01 to 0.04%. (Col. 3, lines 33-41). The addition of guar gum will improve the mouthfeel.

10. They teach using xanthan gum at 0.1 to 0.3% by weight of the total beverage components (Col. 3, lines 64- col. 4, line 7). Xanthan gum will stabilize the emulsion against separation.

11. They teach using preservatives such as benzoic acid, butylated hydroxyanisole (BHA) etc. (Col. 6, lines 8-14). They also teach using emulsifiers such as mono- and diglycerides, propylene glycol esters of fatty acids and lecithin (Col. 6, lines 17-23).

12. They discuss the pH of the beverage which can range from 3.0 to 6.0 and most preferably a pH from 3.0-4.5 (Col. 7, lines 20-28). They teach using acids such as citric,

ascorbic, malic, tartaric, and phosphoric (Col. 8, lines 13-16). The acids are used as both acidulants and flavoring agents.

13. Bunger et al. and Takaichi are silent with respect to the use of agar and lactic acid in their beverage formulations.

14. Takahata disclose an acidified whole milk emulsion beverage containing locust bean gum (emulsifier) in an amount of 0.1-1% by weight and an auxiliary stabilizing agent such as pectin or agar in an amount less than 0.1% by weight, agar being the preferred agent. (Col. 3, lines 14-26). He teaches using other organic acids such as gluconic acid and lactic acid and states that lactic and citric combination is preferred.

15. The amount of citric acid being 1.5% in Example 1 (Col. 4).

16. Takaichi, Bunger and Takahata are silent with respect to the use of gellan gum.

17. Chalupa et al. disclose the use of gellan gum for making a gelled beverage. Their beverage contains 0.01% to 0.15% gellan gum. (Col. 1, lines 62-65). Gellan gum is used for stabilization and gelling purposes.

18. They teach heating the mixture to between 140C and 212C while stirring to hydrate the gellan gum , filling the heated beverage composition in a beverage container and cooling the mixture (Col. 2, lines 10-15).

19. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the teachings of Takaichi by adopting and using the teachings of Bunger, Takahata and Chalupa to make a gelled beverage. One would have done so to benefit from a gelled beverage. Absent any evidence to contrary and based on the combined teachings of the cited references, there would have been a

reasonable expectation of success in making the gelled beverage of the instant application.

20. Claims 2-3 are rejected under 35 U.S.C. 103(b) as being unpatentable over Takaichi, as applied to claim 1, further in view of Shimamura et al. (US 6,395,508).

21. Takaichi is silent with respect to the use of why proteins in the nutrient liquid composition.

22. Shimamura et al. disclose using whey protein concentrate (WPC) and whey protein isolate (WPI) to make whey hydrolyzates (Col. 8, lines 60-65) which may be used in sports beverages (Col. 3, line 25).

23. It would have been obvious to one of ordinary skill in the art, at the time the time the invention was made, to modify the teachings of Takaichi by adopting and using the teachings of Shimamura to make a beverage of the instant application. Absent any evidence to contrary and based on the combined teachings of the cited references, there would have been a reasonable expectation of success in making such a beverage.

24. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emoto (EP 1 046 347)

25. Emoto discloses a beverage with pH of 3.3-4 comprising 50-90% water and 1-50% solids comprising 30-90% saccharide, 5-40% lipid, 2-60% protein including whey protein, 0.2-5% organic acids that include citric, ascorbic, tartaric, malic acid and

gluconic acid wherein these acids are used in combination , 0.1-5% organic acid salt including sodium salt of citric acid,0.2-5% emulsifying agent and 0.2-5% gelling agent including pectin, agar, locust bean gum, xanthan gum and guar gum wherein the gelling agents are used in combination (Abstract and paragraphs 1, 9, 12-15, 17, 20, 23-24, 26-33).

26. Emoto et al. teach mixing the ingredients, heating the mixture to emulsify them followed by cooling. (Paragraphs 39-42 and 47).

27. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the teachings of Emoto to formulate the gel beverage of the instant application. Absent any evidence to contrary and based on the teachings of the cited reference, there would have been a reasonable expectation of success in formulating a gel beverage.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 11-206351 A, WO 91/03948 A and JP 11-75726 A.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-T 5:00 to 3:30 (Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R Badr
Examiner
Art Unit 1794

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794